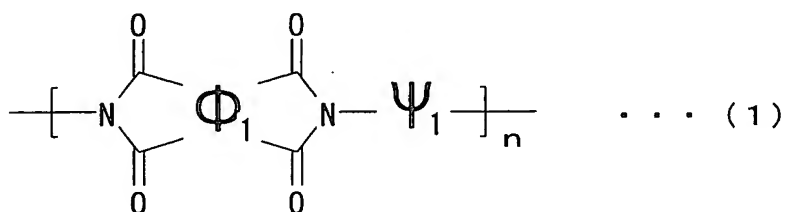
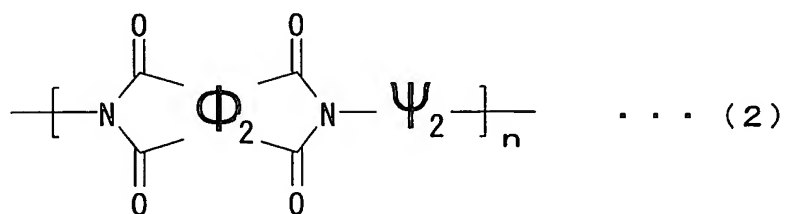


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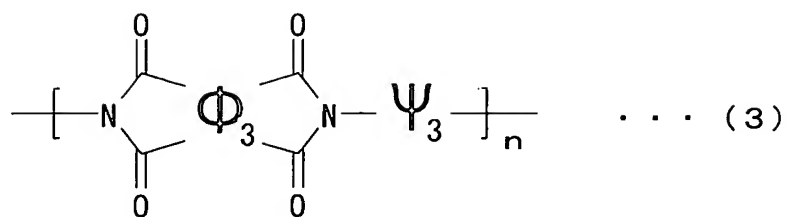


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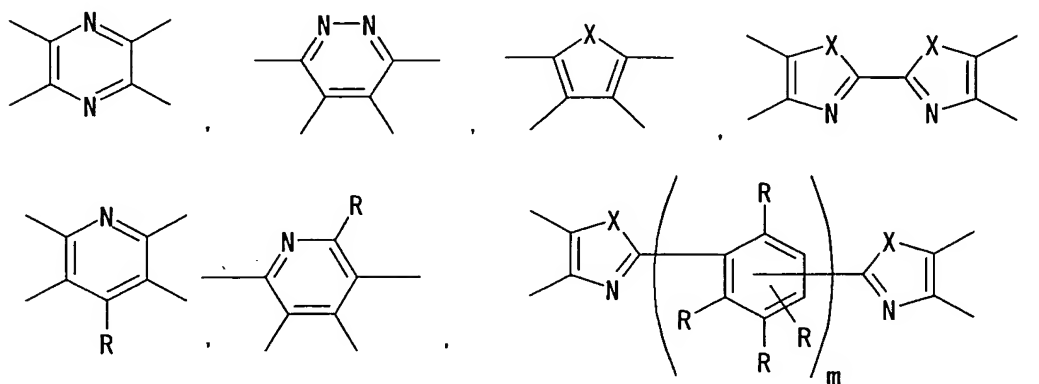
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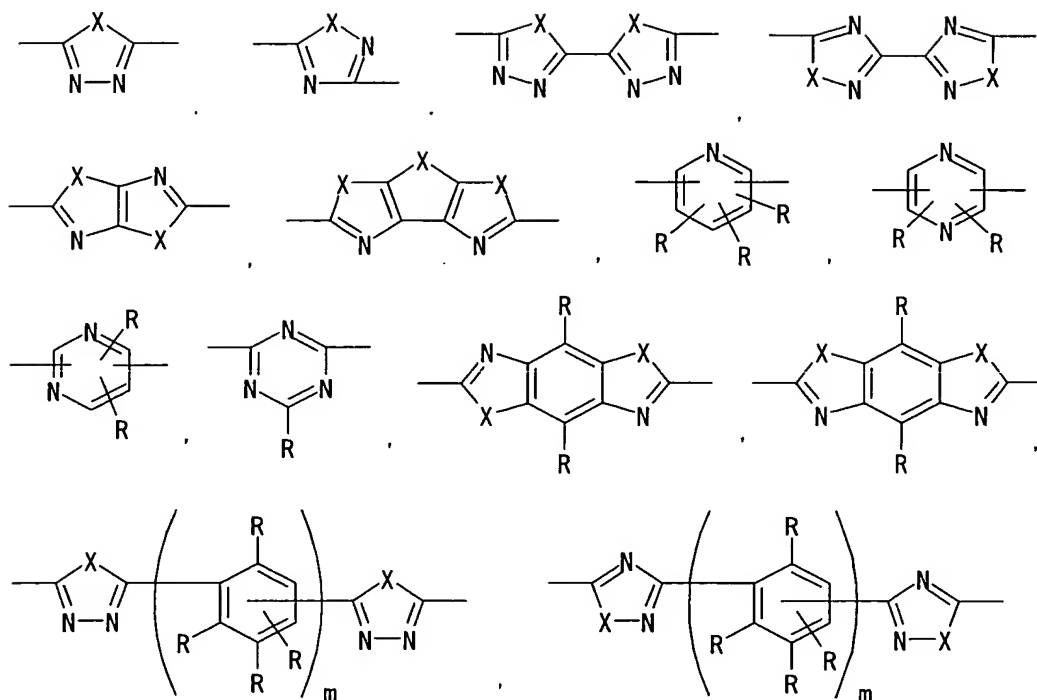


(wherein Φ_3 s are the same or different and are individually a quadrivalent organic group, the Φ_3 s including at least 0.1 molar equivalent of a quadrivalent hetrocyclic group selected from the following Group (a); Ψ_3 s may be the same or different and are individually a bivalent organic group, the Ψ_3 s including at least 0.1 molar equivalent of a bivalent hetrocyclic group selected from the following Group (b); and n is a positive integer):

Group (a):



Group (b) :



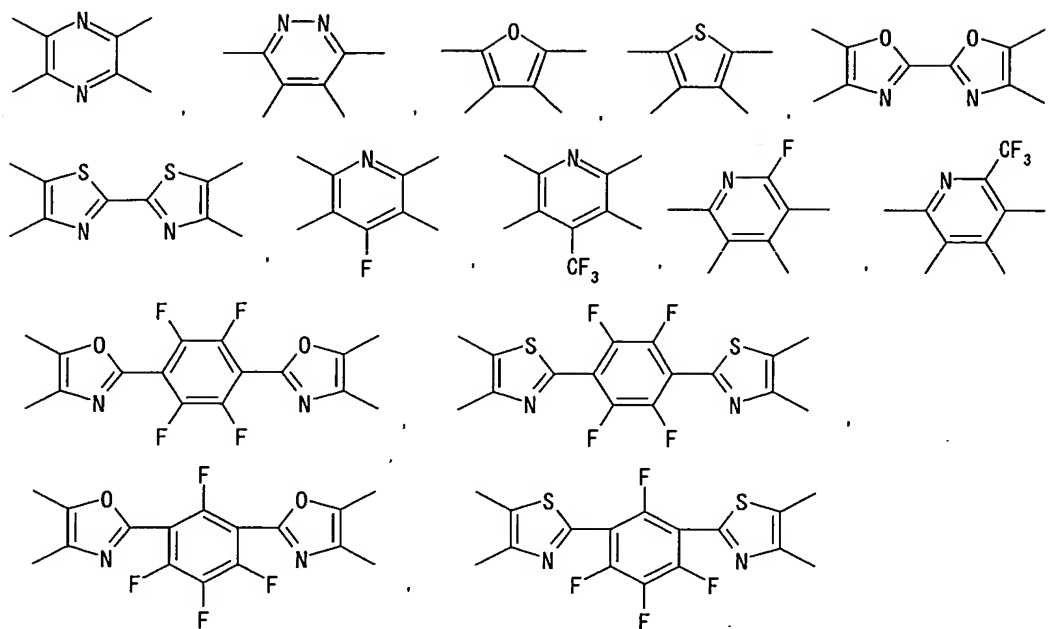
(In the above formulas, Xs are the same or
 5 different and are individually >O group, >S group or
 >N-R^f group (R^f group is perfluoroalkyl group); R are
 the same or different and are individually fluoro
 group, chloro group, bromo group, iodo group,
 perfluoroalkyl group, perfluoroalkoxy group,
 10 perfluoroalkylthio group, nitro group or cyano group; m
 is an integer of 1 to 4).

2. The polyimide optical material according to
 claim 1, wherein the polyimide optical material is
 formed of a compound represented by the general formula
 15 (1).

3. The polyimide optical material according to
 claim 2, wherein the quadrivalent heterocyclic group

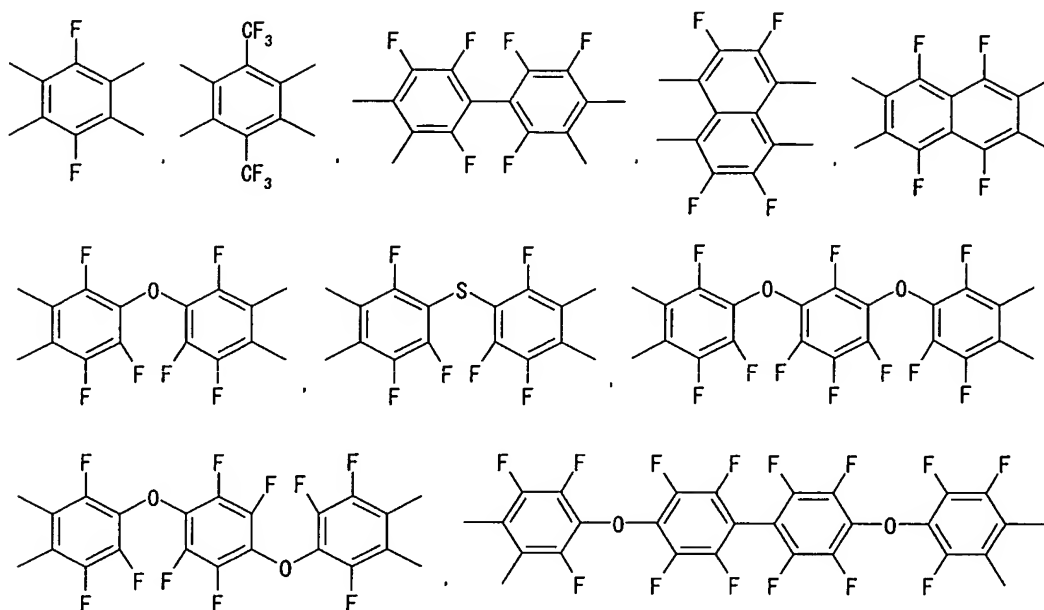
selected from the Group (a) are the groups shown in the following Group (c):

Group (c):



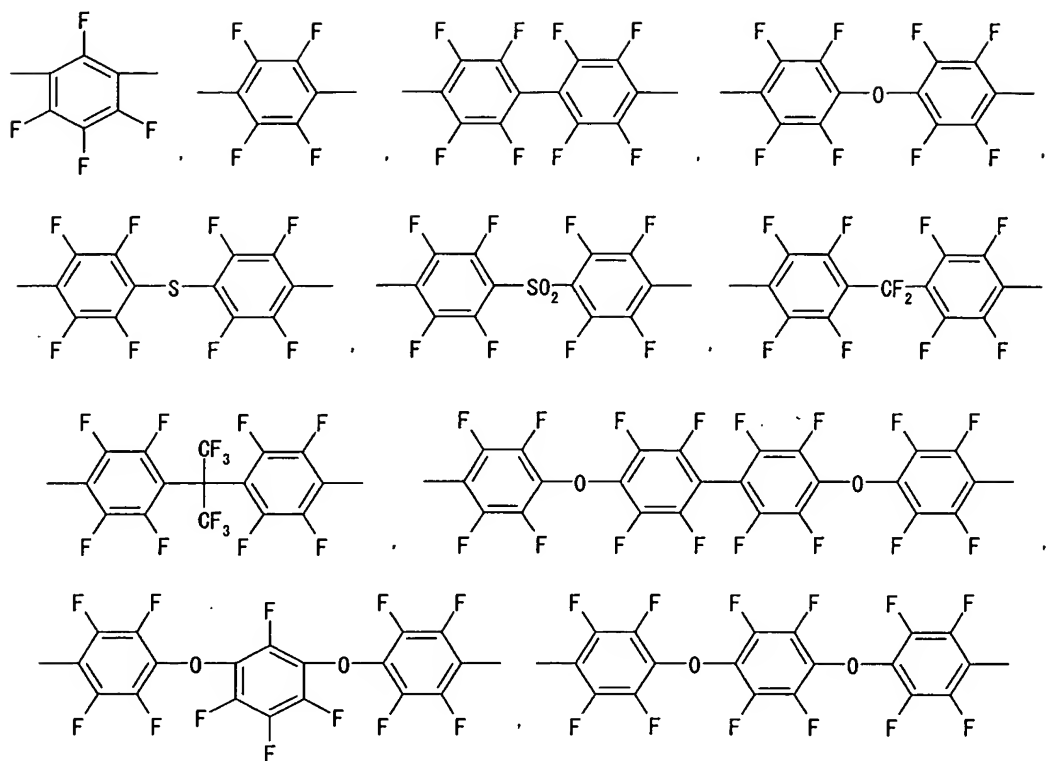
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4. The polyimide optical material according to claim 2, wherein the balance of the Φ_1 s is selected from the quadrivalent fluorine-substituted aromatic hydrocarbon groups shown in the following Group (e):



5 5. The polyimide optical material according to
claim 2, wherein the bivalent organic groups Ψ_1 s are
selected from the bivalent fluorine-substituted
aromatic hydrocarbon groups shown in the following
Group (f):

Group (f):

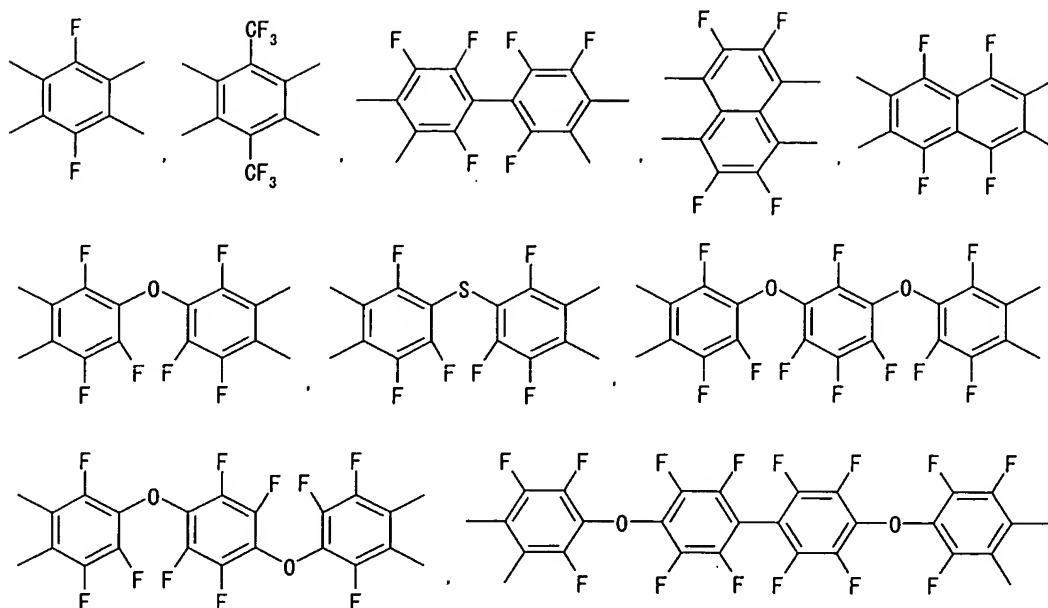


6. The polyimide optical material according to claim 2, wherein the content of fluorine atoms in the unit represented by the general formula (1) is confined within the range of 5 to 40% by weight.

7. The polyimide optical material according to claim 1, wherein the polyimide optical material is formed of a compound represented by the general formula (2).

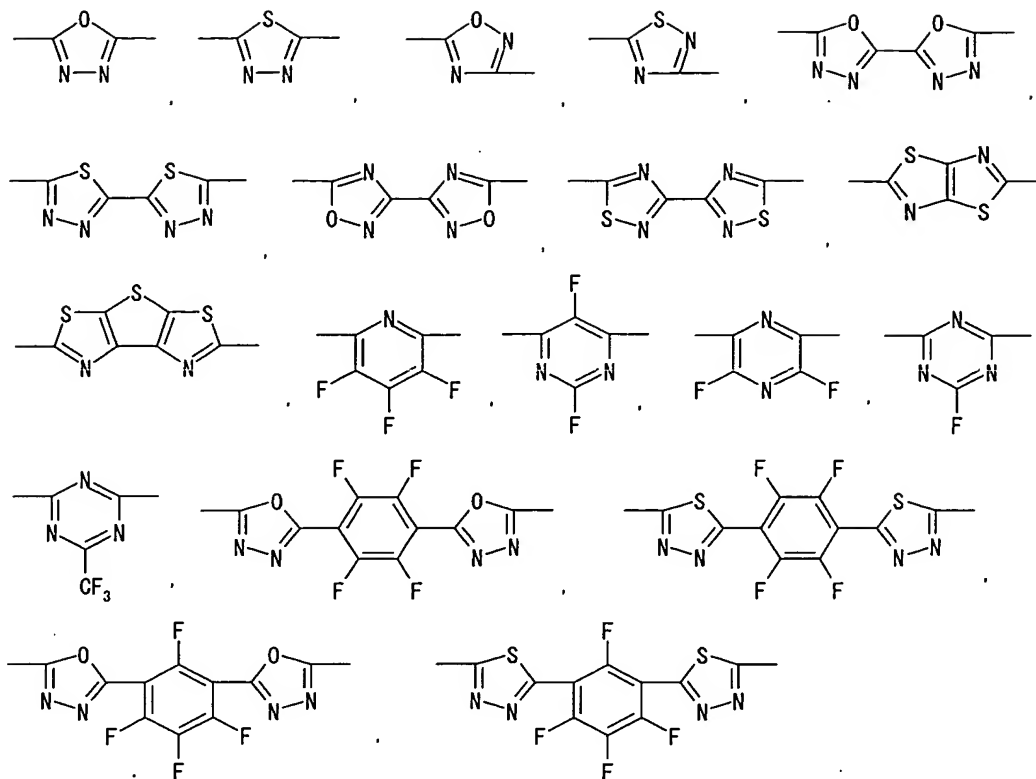
8. The polyimide optical material according to claim 7, wherein the bivalent hetrocyclic group of the Group (b) are the quadrivalent fluorine-substituted aromatic hydrocarbon groups shown in the following Group (e):

Group (e) :



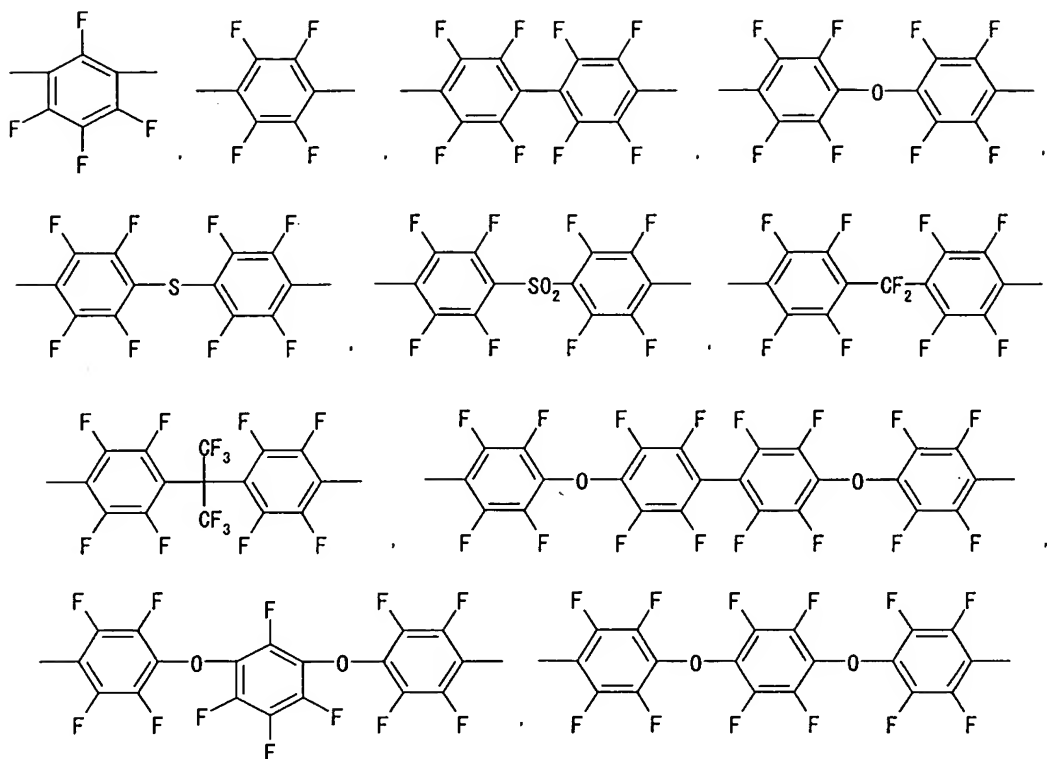
9. The polyimide optical material according to
 5 claim 7, wherein the bivalent heterocyclic group of the
 Group (b) are the bivalent aromatic heterocyclic groups
 shown in the following Group (d):

Group (d):



10. The polyimide optical material according to
 5 claim 7, wherein the balance of the Ψ_2 s is selected
 from the bivalent fluorine-substituted aromatic
 hydrocarbon groups shown in the following Group (f):

Group (f):

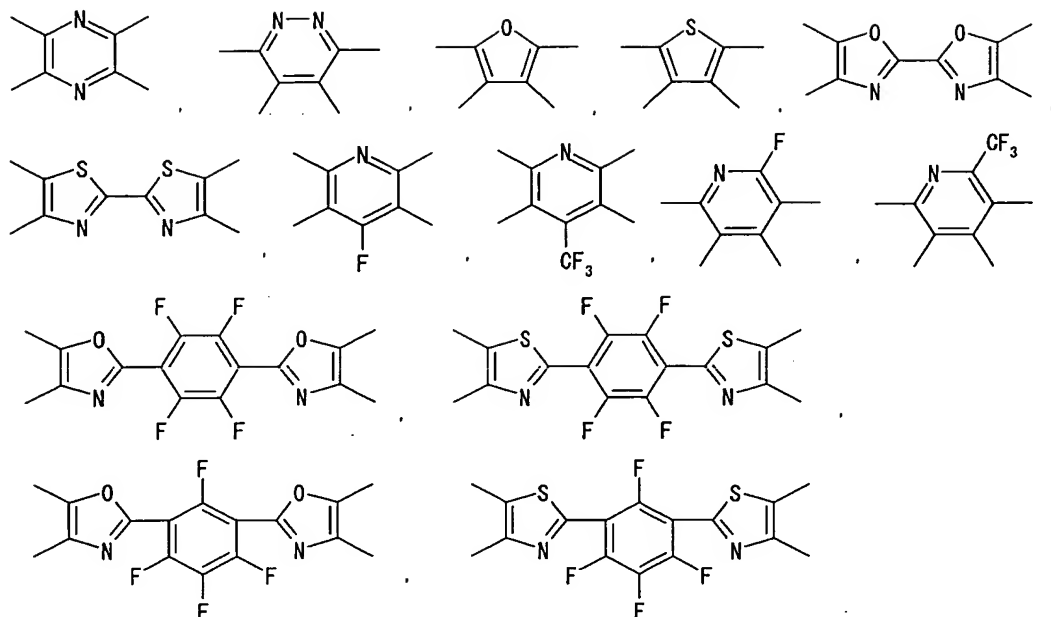


11. The polyimide optical material according to
 5 claim 7, wherein the content of fluorine atoms in the
 unit represented by the general formula (2) is confined
 within the range of 5 to 40% by weight.

12. The polyimide optical material according to
 claim 1, wherein the polyimide optical material is
 10 formed of a compound represented by the general
 formula (3).

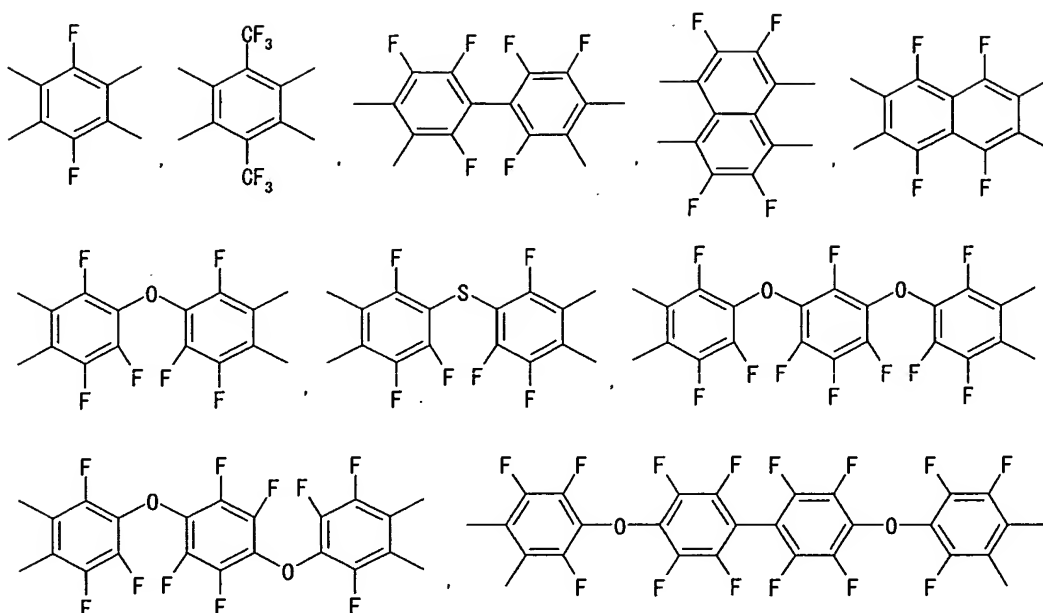
13. The polyimide optical material according to
 claim 12, wherein the quadrivalent hetrocyclic groups
 of the Group (a) are the quadrivalent aromatic
 15 hetrocyclic groups shown in the following Group (c):

Group (c):



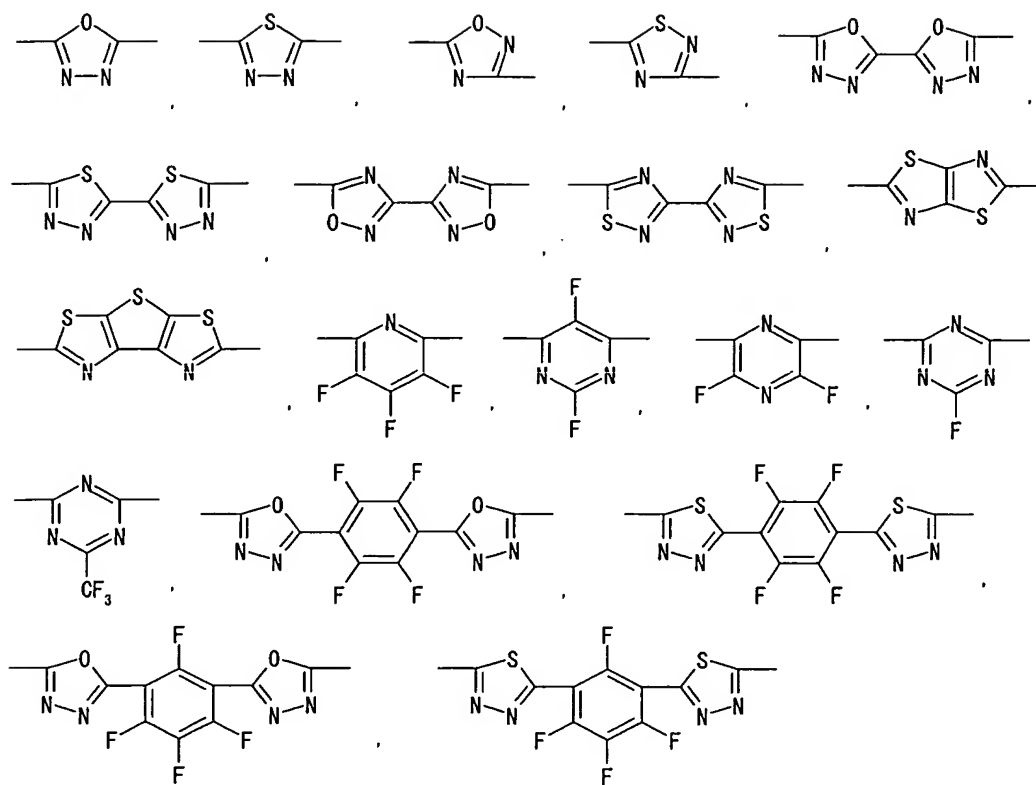
14. The polyimide optical material according to
 5 claim 12, wherein the balance of the Φ_3 s is selected
 from quadrivalent fluorine-substituted aromatic
 hydrocarbon groups shown in the following Group (e):

Group (e):



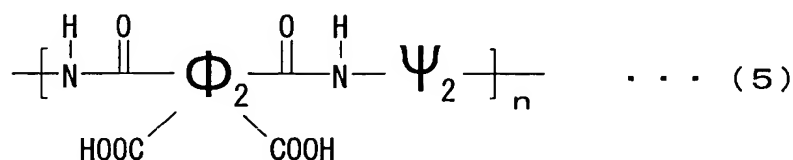
15. The polyimide optical material according to
 5 claim 12, wherein the bivalent hetrocyclic group of the
 Group (b) are the bivalent aromatic heterocyclic groups
 shown in the following Group (d):

Group (d) :

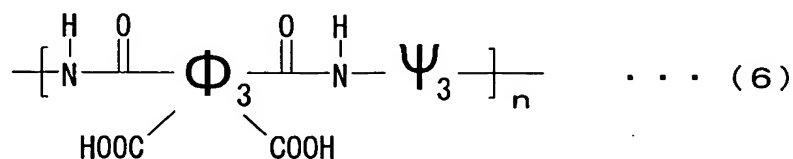


16. The polyimide optical material according to
 5 claim 12, wherein the balance of the Ψ_3 s is selected
 from the bivalent fluorine-substituted aromatic
 hydrocarbon groups shown in the following Group (f):

including at least 0.2 molar equivalent of a quadrivalent hetrocyclic group selected from the following Group (a); Ψ_1 s may be the same or different and are individually a bivalent organic group; and n is a positive integer).



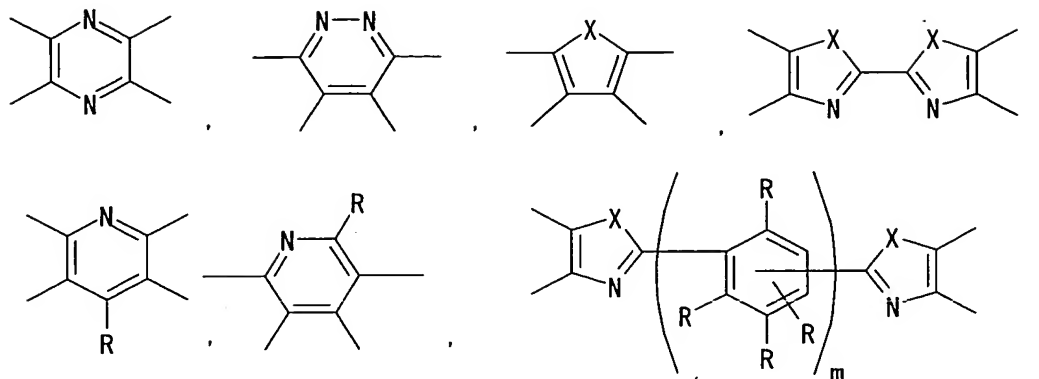
(wherein Φ_2 s may be the same or different and are individually a quadrivalent organic group; Ψ_2 s may be the same or different and are individually a bivalent organic group, the Ψ_2 s including at least 0.2 molar equivalent of a bivalent hetrocyclic group selected from the following Group (b); and n is a positive integer).



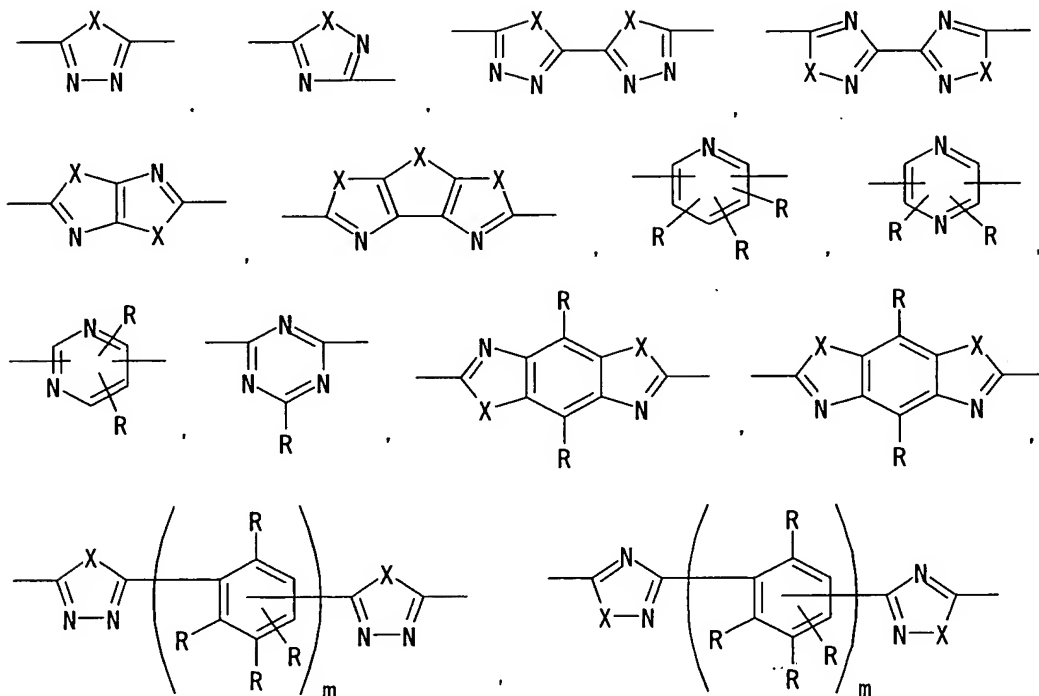
(wherein Φ_3 s may be the same or different and are individually a quadrivalent organic group, the Φ_3 s including at least 0.1 molar equivalent of a quadrivalent hetrocyclic group selected from the following Group (a); Ψ_3 s may be the same or different and are individually a bivalent organic group, the Ψ_3 s including at least 0.1 molar equivalent of a bivalent hetrocyclic group selected from the following

Group (b); and n is a positive integer).

Group (a):



5 Group (b):



(In the above formulas, X may be the same or different and are individually >O group, >S group or >N-R^f group (R^f group is perfluoroalkyl group); R may be the same or different and are individually fluoro

group, chloro group, bromo group, iodo group, perfluoroalkyl group, perfluoroalkoxy group, perfluoroalkylthio group, nitro group or cyano group; m is an integer of 1 to 4).

- 5 19. An optical waveguide element comprising a core layer and a clad layer, wherein the core layer and/or the clad layer contain the polyimide optical material claimed in claim 1.